

**VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM
SECTION C: LAND APPLICATION OF BULK BIOSOLIDS**

LAND APPLICATION AGREEMENT - BIOSOLIDS

A. This land application agreement is made on 5/15/19 between Andrew Cullip, referred to here as "Landowner", and Town of Christiansburg, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in Pulaski County, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
037-1-32A			
037-1-32C			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☐ The Landowner is the sole owner of the properties identified herein.
☒ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply biosolids on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of biosolids for the purpose of determining compliance with regulatory requirements applicable to such application.

Andrew Cullip

Landowner – Printed Name, Title Signature

6346 Courtney Ln, Dublin, VA 24084

Mailing Address

Permittee:

Town of Christiansburg, the Permittee, agrees to apply biosolids on the Landowner's land in the manner authorized by the VPDES Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☐ I reviewed the documents assigning signatory authority to the person signing for landowner above. I will make a copy of this document available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

Randy Wingfield, Town Manager

Permittee – Authorized Representative
Printed Name

Signature

100 E. Main St., Christiansburg, VA 24073

Mailing Address

**VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM
SECTION C: LAND APPLICATION OF BULK BIOSOLIDS**

LAND APPLICATION AGREEMENT - BIOSOLIDS

Permittee: Town of Christiansburg

County or City: Christiansburg, VA

Landowner: Andrew Cullip

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

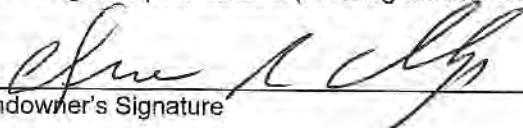
I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).


Landowner's Signature

5-11-19
Date

**VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM
SECTION C: LAND APPLICATION OF BULK BIOSOLIDS**

LAND APPLICATION AGREEMENT - BIOSOLIDS

A. This land application agreement is made on 5/15/19 between Rebecca Cullip, referred to here as "Landowner", and Town of Christiansburg, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in Pulaski County, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
037-1-32A			
037-1-32C			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☐ The Landowner is the sole owner of the properties identified herein.
☒ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply biosolids on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of biosolids for the purpose of determining compliance with regulatory requirements applicable to such application.

Rebecca Cullip

Landowner – Printed Name, Title Signature

6346 Courtney Ln, Dublin, VA 24084

Mailing Address



Permittee:

Town of Christiansburg, the Permittee, agrees to apply biosolids on the Landowner's land in the manner authorized by the VPDES Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

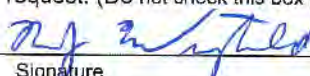
The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☐ I reviewed the documents assigning signatory authority to the person signing for landowner above. I will make a copy of this document available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

Randy Wingfield, Town Manager

Permittee – Authorized Representative
Printed Name

Signature



100 E. Main St., Christiansburg, VA 24073

Mailing Address

**VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM
SECTION C: LAND APPLICATION OF BULK BIOSOLIDS**

LAND APPLICATION AGREEMENT - BIOSOLIDS

Permittee: Town of Christiansburg

County or City: Christiansburg, VA

Landowner: Rebecca Cullip

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

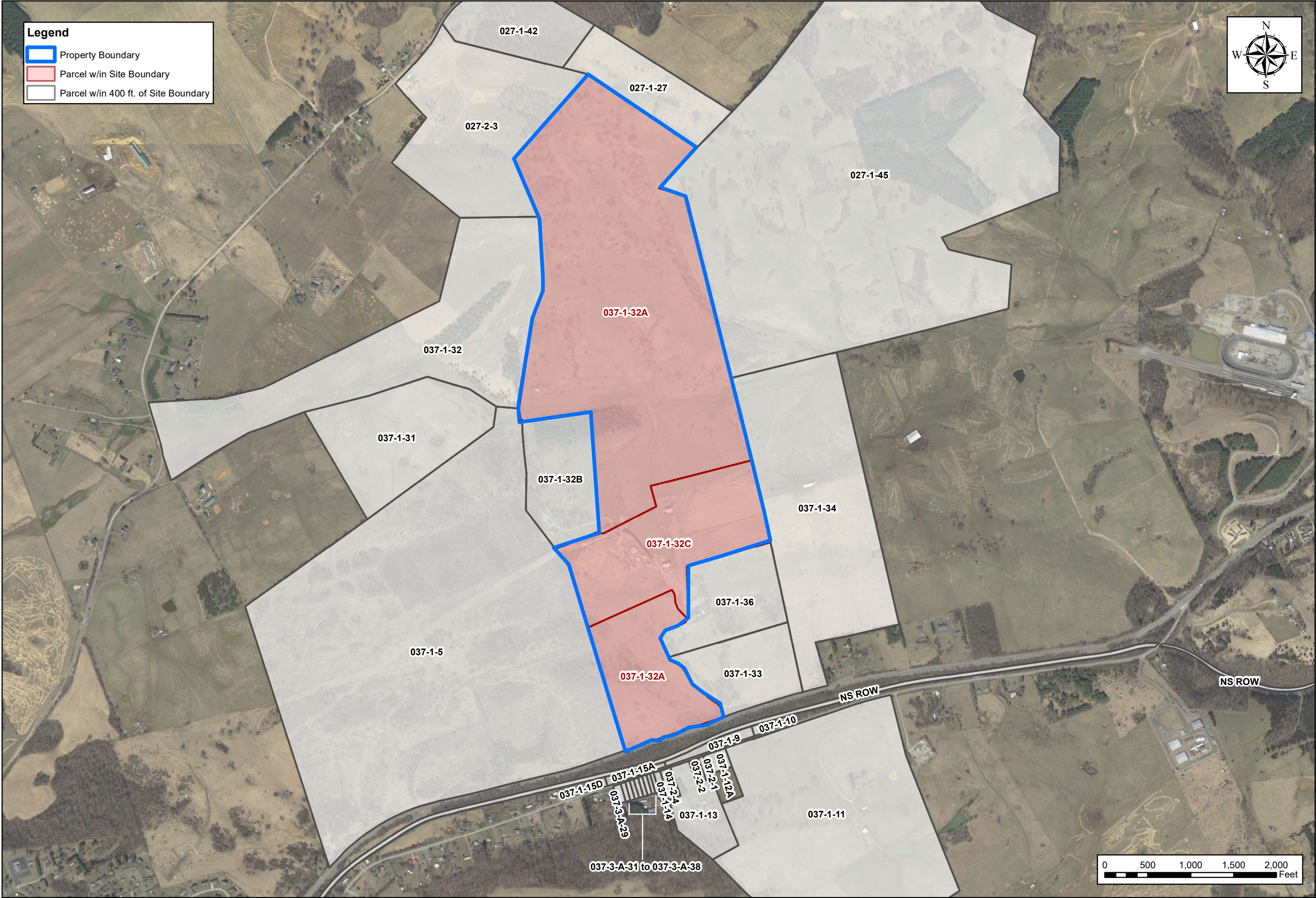
Following biosolids application to pasture or hayland sites:

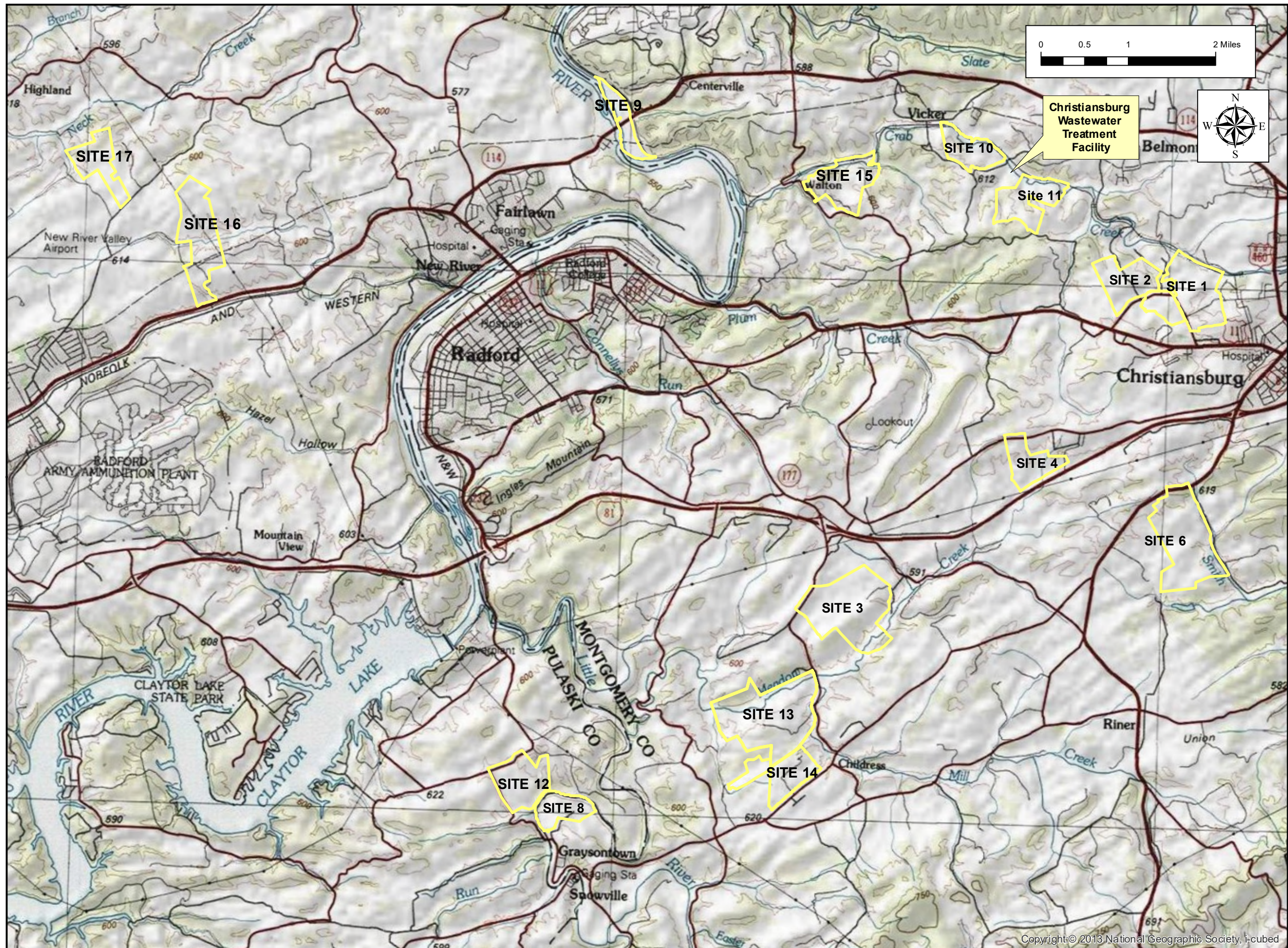
 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Landowner's Signature

5/11/19

Date





Copyright © 2013 National Geographic Society, Inc.

TOWN OF CHRISTIANSBURG WASTEWATER TREATMENT FACILITY
BIOSOLIDS MANAGEMENT PLAN

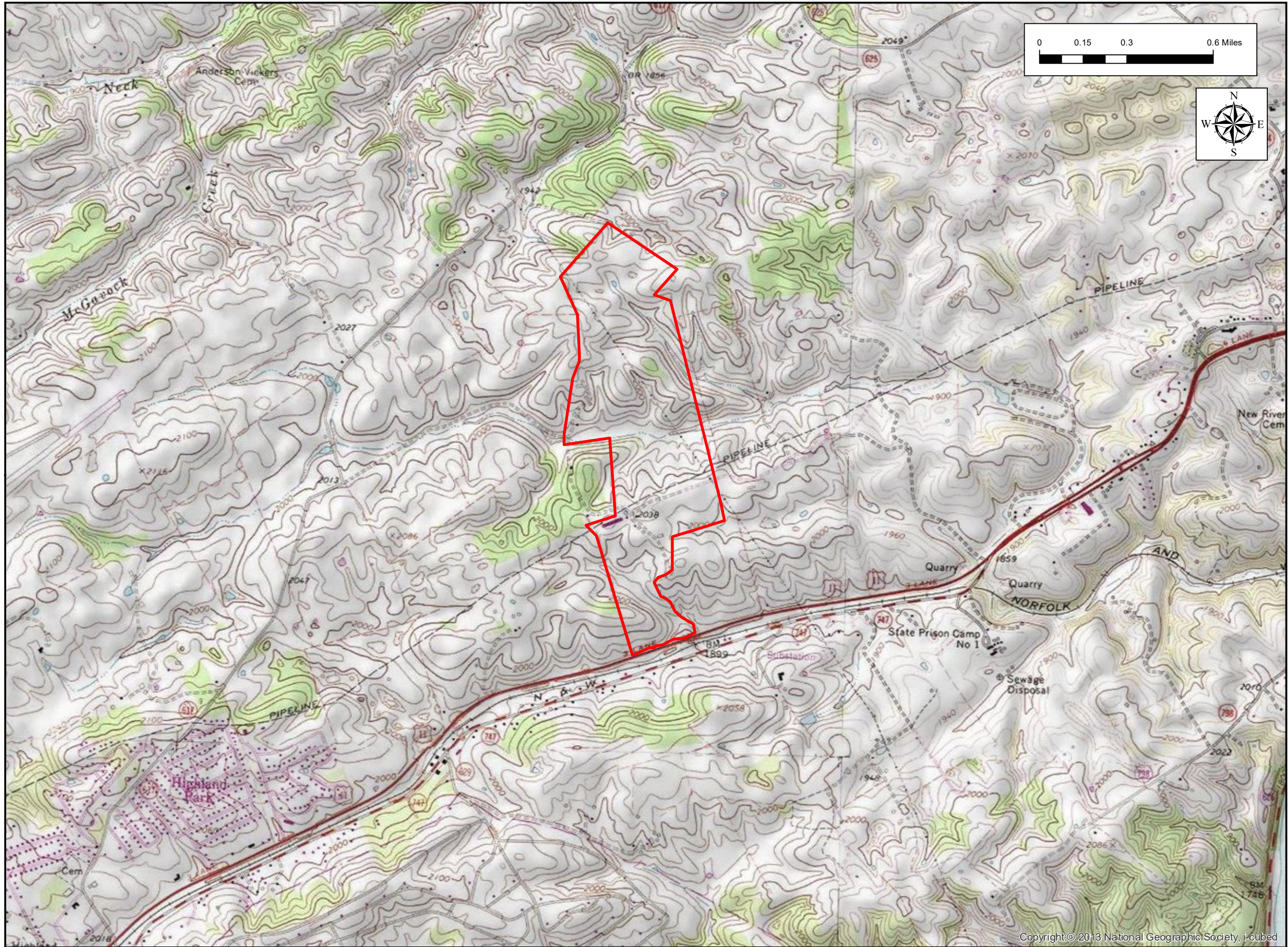
GENERAL LOCATIONS MAP

Job No: 33201
JUNE 2019

Sheet 1 of 1



1341 Research Center Drive, Suite 2100 •
Blacksburg, VA 24060
Main: (540) 552-5548 • www.chacompanies.com



Copyright © 2013 National Geographic Society, Inc.

TOWN OF CHRISTIANSBURG WASTEWATER TREATMENT FACILITY
BIOSOLIDS MANAGEMENT PLAN

Job No: 33201
JUNE 2019

Sheet 1 of 1

CIA
1341 Research Center Drive, Suite 2100 •
Blacksburg, VA 24060
Main: (540) 552-5548 • www.chacompanies.com

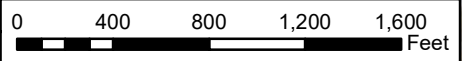
Legend

- Church
- House (200 ft. buffer)
- Cave Entrance (200 ft. buffer)
- Property Boundary (100 ft. buffer)
- Field Boundaries
- Non-Usable Lands
- Trees
- Steep Slopes
- Sinkhole (200 ft. buffer)
- Stream (100 ft. buffer)
- Pond (100 ft. buffer)
- Rock Outcrop (25 ft. buffer)
- Cave Conservation Area
- Road

Note: Based on a recommendation, from the Virginia Department of Conservation and Recreation, a 200' buffer distance was applied to site sink holes and cave entrances versus the 100' buffer that is typically applied to these features types.

Note: The church is a publicly accessible site, and a buffer has been added of at least 200' feet from the church property boundary.

Field Name	Total Acreage	Usable Acreage
Field 1	202.79 acres	85.10 acres
Field 2	55.01 acres	8.44 acres



Map Scale: 1:14,000 if printed on A portrait (8.5" x 11") sheet.

0 200 400 800 1200 Meters

0 500 1000 2000 3000 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge ticks: UTM Zone 17N WGS84

9

0 500 1000 2000 3000
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole

 Slide or Slip


 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Pulaski County, Virginia

Survey Area Data: Version 13, Aug 28, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 22, 2012—Feb 5, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4C	Carbo silty clay loam, 7 to 15 percent slopes	6.0	2.1%
4D	Carbo silty clay loam, 15 to 35 percent slopes	0.5	0.2%
5C	Carbo silty clay loam, very rocky, 7 to 15 percent slopes	28.8	9.8%
5D	Carbo silty clay loam, very rocky, 15 to 30 percent slopes	53.7	18.3%
6E	Carbo-Rock outcrop complex, 10 to 45 percent slopes	17.3	5.9%
8	Dunning silty clay loam, frequently ponded, 0 to 2 percent slopes, frequently flooded	0.5	0.2%
13B	Groseclose and Poplimento silt loams, 2 to 7 percent slopes	11.4	3.9%
13C	Groseclose and Poplimento silt loams, 7 to 15 percent slopes	2.8	0.9%
13D	Groseclose and Poplimento silt loams, 15 to 30 percent slopes	7.0	2.4%
17	Lindside-Nolin silt loams	13.1	4.5%
19C	Lodi gravelly loam, 7 to 15 percent slopes	16.9	5.8%
19D	Lodi gravelly loam, 15 to 30 percent slopes	19.7	6.7%
20B	Lowell silt loam, 2 to 7 percent slopes	11.1	3.8%
20C	Lowell silt loam, 7 to 15 percent slopes	24.6	8.4%
20D	Lowell silt loam, 15 to 30 percent slopes	37.8	12.9%
32B	Slabtown silt loam, 2 to 7 percent slopes	3.5	1.2%
32C	Slabtown silt loam, 7 to 15 percent slopes	2.3	0.8%
35C	Wurno-Newbern-Faywood silt loams, 7 to 15 percent slopes	25.0	8.5%
35D	Wurno-Newbern-Faywood silt loams, 15 to 30 percent slopes	11.2	3.8%
Totals for Area of Interest		293.3	100.0%